

JMYT-237US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Martyn Vincent Twigg : Art Unit:
 Application No.: To Be Assigned : Examiner:
 Filed: Herewith :
 FOR: PROCESS AND APPARATUS FOR :
 TREATING COMBUSTION EXHAUST GAS :

5/19
 D.G.
 1-10-02

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
 Washington, DC 20231

SIR:

Prior to examination, please amend the above-identified application as follows.

IN THE CLAIMS:

Please replace claims 1, 4-7, 9-12, 14-16, and 18-21 with the following amended claims.

1 1. (Amended) A system for treating combustion exhaust gas,
 2 which system comprising: a catalyst effective to promote oxidation of at least NO
 3 to NO₂; a filter downstream of the oxidation catalyst, which filter being effective to
 4 collect soot and hold it for combustion reaction with the NO₂ in the gas; a NOx
 5 absorber downstream of the filter, which NOx absorber is charged with solid
 6 adsorbent; means for introducing intermittently a regenerant of the absorber, which
 7 means being effective to inject a NOx-specific reactant upstream of the absorber;
 8 and a catalyst system effective to promote reactions of hydrocarbons (HC) and CO
 9 with O₂ to H₂O and CO₂ and to treat NOx to N₂, wherein said catalyst system is at
 10 least one of: (1) associated with the absorber; or (2) located downstream of the
 11 absorber.

1 4. (Amended) A system according to claim 1, wherein the NOx
 2 absorbent comprises at least one of: (a) compounds of alkali metals, alkaline earth
 3 metals, rare earth metals and transition metals or a mixed oxide of any two or more
 4 thereof; and (b) zeolites, carbons and/or high surface area oxides.